

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all previous versions, and listings, of claims in the application:

1. (Currently Amended): A method of collecting a biological fluid comprising:
collecting a biological fluid by natural flow, without a pump;
measuring a natural flow fluid flow rate of the biological fluid; and
pumping anticoagulant and/or preservation solution from a reservoir to the collected biological fluid at a solution flow rate;
wherein:
measuring a natural flow fluid flow rate of the biological fluid comprises weighing the collected biological fluid, the pumped anticoagulant and/or preservation solution, and any anticoagulant and/or preservation solution remaining in the reservoir; and
the solution flow rate is adjusted while collecting the biological fluid based upon the measured fluid flow rate to preserve a selected ratio between the collected biological fluid and the anticoagulant and/or preservation solution.
2. (Previously Amended): The method of Claim 1, further comprising:
collecting the biological fluid in a collection bag; and
pumping the anticoagulant and/or preservation solution to the collection bag;
wherein the solution flow rate is adjusted while collecting the biological fluid based upon the measured fluid flow rate to preserve a selected ratio in the collection bag between the collected biological fluid and the anticoagulant and/or preservation solution.
3. (Original): The method of Claim 1, wherein the biological fluid comprises blood.
4. (Previously Amended): The method of Claim 1, wherein measuring a fluid flow rate of the biological fluid further comprises calculating a variation in weight of the ~~fluid~~ collected biological fluid, the pumped anticoagulant and/or preservation solution, and any anticoagulant and/or preservation solution remaining in the reservoir.
5. (Original): The method of Claim 1, wherein pumping comprises:
pumping using a peristaltic pump having a variable rotation speed; and

adjusting the variable rotation speed to obtain the appropriate solution flow rate.

6. (Withdrawn): A collection machine comprising:

a fluid flow measurement device operable to measure a biological fluid flow rate;

a pump operable at a variable rotation speed to pump an anticoagulant and/or preservation solution at a solution flow rate;

wherein the variable rotation speed of the pump is slaved to the biological fluid flow rate.

7. (Withdrawn): The collection machine of Claim 6, further comprising a measuring device operable to measure the weight of a biological fluid collected and further operable to calculate the biological fluid flow rate based upon weight measurements.

8. (Withdrawn): The collection machine of Claim 6, further comprising a peristaltic pump.

9. (Withdrawn): A bag system comprising:

a biological fluid collection device;

a collection bag in fluid communication with the fluid collection device;

a solution bag containing anticoagulant and/or preservation solution in fluid communication with the collection bag;

a collection machine having:

a fluid flow measurement device operable to measure a biological fluid flow rate to the collection bag; and

a pump operable at a variable rotation speed to pump an anticoagulant and/or preservation solution from the solution bag to the collection bag at a solution flow rate;

wherein the variable rotation speed of the pump is slaved to the biological fluid flow rate; and

wherein the solution flow rate is adjusted to maintain a selected ratio of biological fluid and anticoagulant and/or preservation solution in the collection bag.

10. (Withdrawn): The system of Claim 9, wherein measurement of pressure within the system is not required to maintain the selected ratio of fluid and solution.

11. (Withdrawn): The system of Claim 9, further comprising a first tube operable to provide fluid communication between the collection device and the collection bag.
12. (Withdrawn): The system of Claim 11, further comprising a second tube operable to provide fluid communication between the solution bag and the collection bag.
13. (Withdrawn): The system of Claim 12, further comprising the a circuit opener disposed on the second tube near a connection between the second tube and the solution bag.
14. (Withdrawn): The system of Claim 12, further comprising a connector operable to connect the first tube and the second tube.
15. (Withdrawn): The system of Claim 12, wherein the first tube is connected to the collection device and the collection bag, and wherein the first tube has a length of at least 15 cm between the connection to the collection device and the connection to the collection bag.
16. (Withdrawn): The system of Claim 15, wherein the first tube has a length of at least 25 cm between the connection to the collection device and the connection to the collection bag.
17. (Withdrawn): The system of Claim 12, wherein the second tube is compressed by the pump in a compression region, and wherein the compression region has a hardness less than that of the first tube.
18. (Previously Presented): The method of Claim 2, further comprising:
collecting the biological fluid with a collection device in fluid communication with the collection bag via a tube; and
detecting the presence of the biological fluid in the tube.
19. (Previously Presented): The method of Claim 18, wherein detecting the presence of the biological fluid in the tube comprises optical or ultrasonic sensing.
20. (Currently Amended): The method of Claim 2, further comprising collecting a second sample of the biological fluid by natural flow, without a pump.